

REMARKS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested. Claims 1 and 17 are amended without prejudice or disclaimer.

Response to Arguments

Applicants thank the Examiner for the additional analysis and focusing the arguments in this case. We note that on page 3 of the Office Action it appears that the term “call-type” is broadly interpreted to read on any clustered/classified classes regarding objective, call-type classifier, or call-type itself. The Office Action cites column 1, 2, 3 and 9 and asserts that Arai et al. disclose “clustering phrases into grammar fragments” and “to generate a collection of grammar fragments” which represent “meaningful phrase clusters” relating/regarding call types, tasks or routing objectives. The Office Action then concludes “thus, generating the grammar fragments is properly read on the claimed generating call-types, since the grammar fragments are or at least include call-types.” Applicants have previously argued that collecting the process of collecting a plurality of utterances and generating a plurality of call-types is not taught or suggested in the reference. We now amend claim 1 to recite that collecting the plurality of utterances is done independent of any call type.

Applicants note that the cited portion with regards to clustering phrases and generating grammar fragments relies upon the grammar fragments being or at least including call types. See Office Action, Page 3, line 11. Furthermore, it is clear that Arai et al. require their generated collection of grammar fragments to be based on call-type. For example, in the summary of the invention, column 2, lines 13-34, Arai et al. teach that “the goal may be to generate a collection of grammar fragments each representing a set of syntactically and semantically phrases... Each

candidate phrase may have three associated property distributions; of succeeding context, of preceding context, and of associated semantic actions.” The requirement that the generated grammar fragments be associated with call-types is because of the analysis which involves semantically similar phrases. Notably, column 3, lines 54-60, cited on page 3 of the Office Action states that “on the other hand, the semantic associations focus on the relationship between a fragment in spoken language and the tasks of call-type corresponding to the speech. The distribution of call-types for a fragment must be comparable to that for another fragment if the two fragments are to be clustered. The semantic association is therefore the cross-channel association between speech and call-types.” Inasmuch as claim 1 now requires the collection of a plurality of utterances to be independent of any call-type, claim 1 is easily distinguishable from Arai et al. Arai et al. in fact teach away from this approach by defining their semantic association as being the cross-channel association between speech and call-types.

Similarly, the Office Action cites on page 4 column 9, lines 14-8 [sic] of Arai et al. as teaching a collecting a plurality of utterances. We note that column 9 starting at line 4 discusses the grammar fragment clustering sub-system that operates on a database of utterances “each of which is related to one of the pre-determined set of routing objectives where each such utterance is labeled with its associated routing objective.” The routing objective is the equivalent of the call-type and therefore Applicants submit that because claim 1 recites collecting a plurality of utterances independent of any call type, that this clearly teaches away from the grammar fragment clustering sub-system 1100 taught in column 9 because it requires each utterance to be labeled with its associated routing objective. Therefore, by requiring the collection of a plurality of utterances to be independent of any call-type, Applicants submit that claim 1 differs from Arai et al.

Applicants submit that the remaining steps, of claim 1 also come into a clearer focus with the amendment. For example, step b. of claim 1 recites generating a plurality of call types, each generating call type being based on a first set of utterances selected from the collected plurality of utterances is also not taught or suggested in the reference. Applicants previously argued that because Arai et al. required the existence in advance of call-types, they fail to teach the concept of generating a plurality of call types. Applicants note that the Office Action on page 3, last line states “in addition, it is noted that a speech recognition system with statistical models always needs an initial process (from scratch) to assign, label or generate the corresponding classes or models (such as call-type in this case) for the corresponding training utterance or transcription, so that the argument suggesting that Arai can only use existing call types lacks sufficient evidence and not persuasive.” Applicants respectfully submit that our position is not that speech recognition systems do not have to have some kind of initial process in order to be developed, but that Arai et al.’s approach simply begins not from scratch but from the use of a database having “a large number of utterances each of which is related to one of the predetermined set of routing objectives, for each such utterance is labeled with its associated routing objective.” Column 9, lines 5-8.

Applicants submit that it is Arai et al. that defines their routing objectives as “predetermined”. In any event, Applicants submit that this position is persuasive and the amendments to claim 1 which requires collecting a plurality of utterances independent of any call-types draws a clear distinction between the use of the predetermined set of routing objectives (call-types) and a collection of a plurality of utterances that are independent of call-type. Applicants therefore submit that the second step of claim 1 is not taught or suggested in the reference because it involves generating a plurality of call-types based on the collective plurality

of utterances, which are independent of any call-type. Applicants submit that Arai et al. teach away from the process of generating a plurality of call-types in the manner recited in claim 1.

With respect to the step of modifying the plurality of call-types based on the testing, Applicants respectfully traverse the analysis that the conclusion of the Office Action on pages 5 and 6 that Attwater et al. teaches this limitation and that it would be obvious of one of skill in the art to modify the clusters or classes of the transcribed data so as to form a different language model. The conclusion on page 6 of the Office Action is that one of skill in the art would modify Arai et al. by combining the feature of using a candidate set of grammar fragments associated with the clustered call-types and the training transcription disclosed by Arai et al. and the feature of using supervised training and/or manually checking clusters with modifying capabilities so that the call-type of the candidate fragments associated with the utterance/transcription can be manually modified and another fully expanded saline fragment network can be generated.

Applicants again submit that the amendment to claim 1 renders this entire analysis moot. In other words, this analysis clearly depends upon the grammar fragments of Arai et al. already being associated with “the clustered call-types in the training transcription” disclosed by Arai et al., column 3, lines 1-60. Absent the grammar fragments having an associated call-type, there is nothing to modify “so that the call-types of the candidate fragments associating the utterances/transcription can be manually modified....” Applicants respectfully submit that there is now no possible call-type which can be modified as the basis for the analysis to combine the references. Furthermore, Applicants respectfully submit that even if combined, the references fail to teach modifying the plurality of call-types that are generated from a collection of a plurality of utterances that were collected independent of any call-type. / Applicants respectfully submit that claim 1 and its dependent claims are patentable and in condition for allowance.

Claim 17 is also amended in a manner similar to claim 1. Therefore, Applicants submit that claim 17 and its dependent claims are patentable and in condition for allowance.

Rejection of Claims 1-3, 5-6, 8-11, 13-14 and 16-22 Under 35 U.S.C. §103(a)

The Office Action rejects claims 1-3, 5-6, 8-11, 13-14 and 16-22 under 35 U.S.C. §103(a) as being unpatentable over Arai et al. (U.S. Patent No. 6,173,261) (“Arai et al.”) in view of Attwater et al. (U.S. Patent No. 6,839,671) (“Attwater et al.”). Applicants respectfully incorporate the arguments set forth above and submit that Arai et al. and Attwater et al. fail to teach each limitation of the claims if combined. Furthermore, Applicants submit that one of skill in the art would not have sufficient motivation or suggestion to combine the references in the manner recited inasmuch as Applicants have amended the independent claims to require the collection of the plurality of utterances to be independent of any call type. Therefore, Applicants respectfully submit that these claims are patentable and in condition for allowance.

Rejection of Claims 4 and 7 Under 35 U.S.C. §103(a)

The Office Action rejects claims 4 and 7 under 35 U.S.C. §103(a) as being unpatentable over Arai et al. in view of Attwater et al. and Maes et al. (U.S. Patent Publication No. 2003/0088421) (“Maes et al.”). Applicants respectfully submit that these claims are patentable and in condition for allowance inasmuch as they depend from a patentable parent claim. Applicants also do not acquiesce that it would be obvious for one of skill in the art to combine the references and reserve the right to argue against such combination.

CONCLUSION

Having addressed all rejections and objections, Applicants respectfully submit that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Novak, Druce & Quigg, LLP, Account No. 14-1437** for any deficiency or overpayment.

Respectfully submitted,

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